

Technical Disclosure Commons

Defensive Publications Series

October 18, 2017

Platform for location and time-based content sharing

Alexander Haubold

Follow this and additional works at: http://www.tdcommons.org/dpubs_series

Recommended Citation

Haubold, Alexander, "Platform for location and time-based content sharing", Technical Disclosure Commons, (October 18, 2017)
http://www.tdcommons.org/dpubs_series/763



This work is licensed under a [Creative Commons Attribution 4.0 License](https://creativecommons.org/licenses/by/4.0/).

This Article is brought to you for free and open access by Technical Disclosure Commons. It has been accepted for inclusion in Defensive Publications Series by an authorized administrator of Technical Disclosure Commons.

Platform for location and time-based content sharing

ABSTRACT

Private collections of images and other media can be of interest to individuals and groups beyond the owner of those collections. This disclosure describes a platform where private collections of media can be shared, with user permission, with others who share a common interest in the location and time associated with contents of these collections. The platform is configured as a private group and functions as a social circle to share images and other media around the spatial and temporal contexts of the contents of the media. The collections can be used, for example, to archive the historical changes at a particular location.

KEYWORDS

- User-generated content
- Photo album
- Spatial context
- Temporal context
- Location-based collection

BACKGROUND

Large volumes of media collections such as personal photo collections and videos are neither shared publicly nor in private social circles. For example, such personal collections include images and videos of family, friends, and acquaintances, and generally elicit sparse public interest. The collections also include images of places with a marginally broader context of interest, e.g., otherwise non-noteworthy places of little or no public interest, but of interest to a small set of individuals. Examples of such places are neighborhood gardens, street blocks, schools, and specific spots in public parks.

The timeframe during which these images and videos were taken, i.e., their temporal context, further narrows the scope of interest in a particular place. The temporal context carries different meaning to different viewers. Even though there may not be public interest in such narrow-context images, the images have potential value beyond the owner/collector, such as to a social circle with spatial and temporal contextual knowledge of the location captured in the image. For example, a photograph of a person at a family home represents a place of narrow, i.e., non-public, interest with a fairly well-defined timestamp. The person in the photograph relates differently to different viewers, e.g., childhood friends and neighbors may relate differently to the photograph.

A spatio-temporally curated collection of user-generated media can record, for example, the transformation in time of the appearance and function of a particular place. Some transformations of appearance and function are significant; for example, a forest being cleared to make space for a factory; eventually, the factory being demolished leaving an otherwise empty field; and the field ultimately developed into a residential building. Some transformations are subtle, e.g., a summer cottage in a community that experiences minor changes, such as remodeling and changing flora. Despite subtleties that appear minor, each snapshot in time relates differently to a viewer with a personal experience at the place.

DESCRIPTION

This disclosure describes a platform that allows for private collections of images and other media to be shared, with consent of the owners of such media, with others that have an interest in the spatial and temporal contexts of the media. The platform includes a system by which images are shared within social circles, determined by the geographic location and time associated with the media, e.g., images.

The platform discovers, forms, and grows the social circle organically as new members with similar contextual, e.g., space and time, interests join the social circle and optionally make contributions to it. The platform can be used to gather content beyond images, such as text (e.g., stories, blogs, etc.) and video. The platform provides a content space in which users can reconnect to past acquaintances or form new ones based on common interest of space (location) and time. The platform also serves as an archive for visual material that can be made publicly available as a resource for content research.

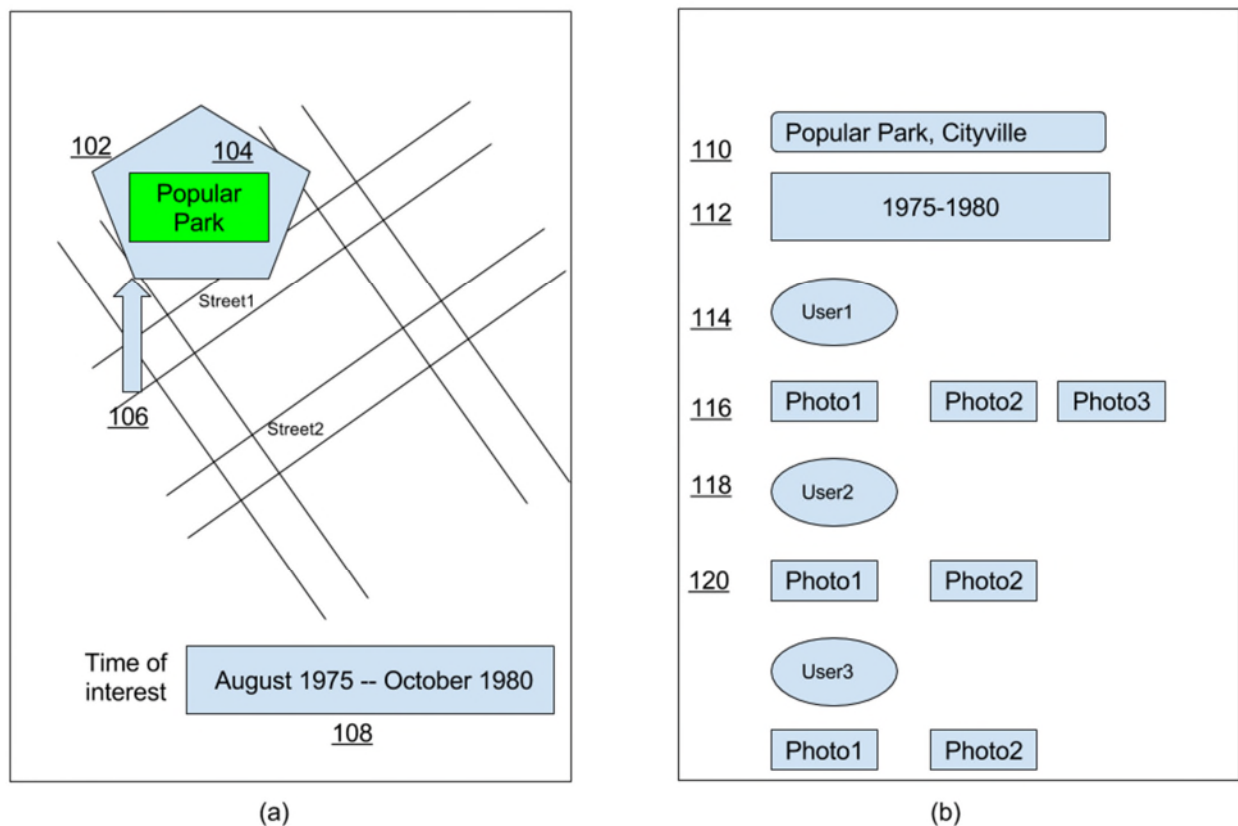


Fig. 1: Formation of social circles around spatial and temporal contexts

Fig. 1 illustrates the formation of social circles around spatial and temporal contexts, per techniques of this disclosure. The process of creating a shared and discoverable collection begins with the selection of a location, e.g., on a map, as in Fig. 1(a). The location can be an area delimited by a polygon (102) or a specific point of interest, e.g., popular park (104) that a

user selects (106). The user then defines a time period of interest (108), and searches for social circles that match the user's selected criteria.

If no existing circle matches the criteria, the user is invited to start a new circle. The user then adds images or other contents to the collection for the circle and provides title, description, and keywords. The platform provides facilities for easy addition of content to the system. Contents are private to the members of the collection (which may initially be a single user), whereas the title, description and keywords are public. As other individuals interested in similar spatio-temporal criteria search and discover this social circle, they request, and are granted admission to the social circle, based on consent from other participants in the circle. As shown in Fig. 1(b), the collection includes details of the location (110); the time-frame of interest (112); and with user's consent, usernames/profiles (114, 118) and content shared by respective users (116, 120); etc.

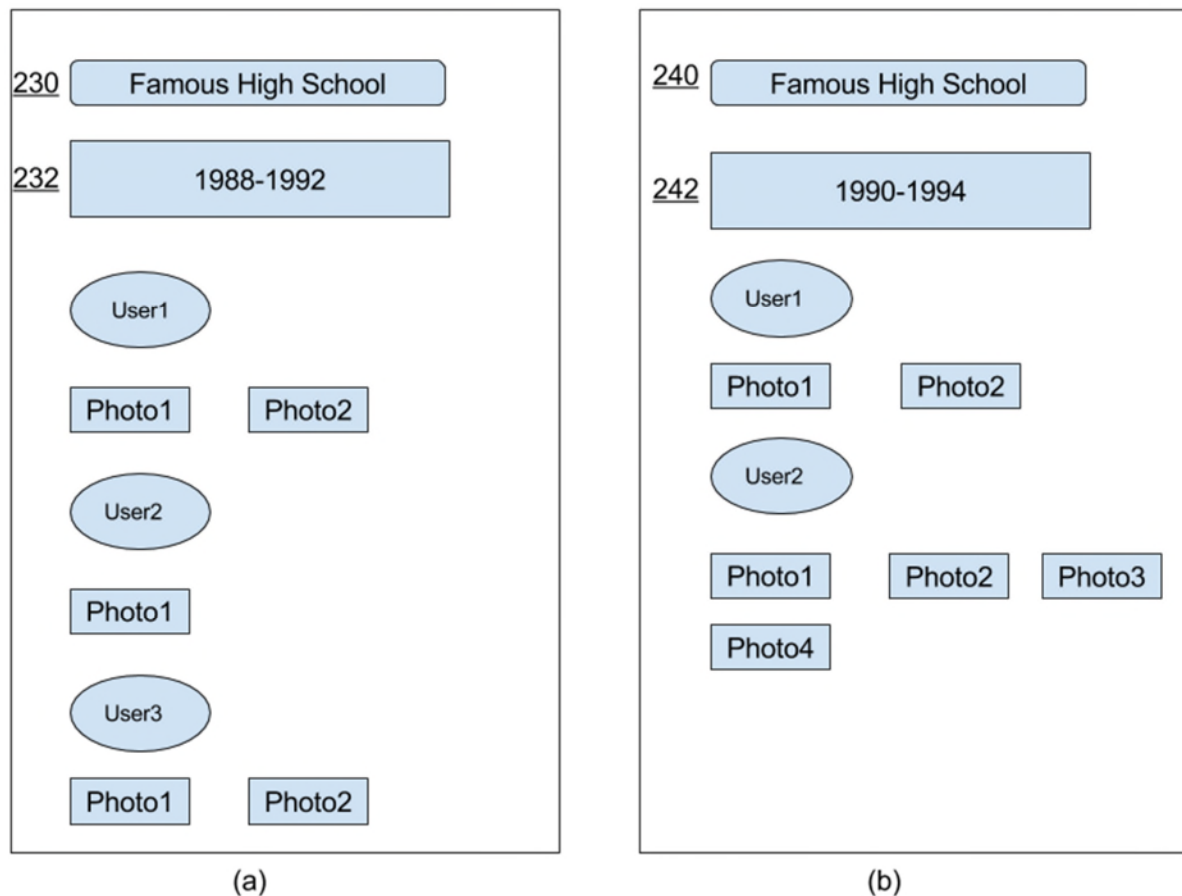


Fig. 2: Querying with spatial or temporal criteria

Fig. 2 illustrates responses when the platform is queried with spatial or temporal criteria. Upon the user selecting a location, existing collections (230, 240) are surfaced, each with their respective time periods (232, 242) and keywords. The collection can be browsed via title, description, and membership. Content deemed suitable for public viewing and for which consent for public display has been obtained is also surfaced. Membership information (username and/or full name) is surfaced according to the permissions provided by each member. The user can then elect to join an existing collection or create a new one.

All contents added to the collection are associated with specific dates or time periods to the extent possible. This includes machine-tagging techniques such as Exchangeable Image File

Format (EXIF)-tagging or manual tagging. Within the collection's social circle, users can provide corrections for all material. Other machine learning techniques such as Optical Character Recognition (OCR), extraction of writing from the images, and generation of metadata can also be suitably employed. The system also asks members to contribute additional material if, for example, heuristic analysis reveals gaps in information about a location.

Membership in the social circle can be moderated by members of the group, e.g., by a set of administrators defined for the group, including the original owner. To regulate membership and prevent malicious users from joining a group, users are rated for their legitimacy by other users. If a group of members discovers illicit membership, such members are ejected. Ejections from groups count against that member's score. This information is made available by the platform when that member attempts to join another group.

When users provide consent for analysis of content, the platform can determine when collections from different social groups overlap in space and time. In these instances, the platform can suggest to the owners/administrators of the collections that the contents be combined or otherwise linked in a meaningful way. Additionally, for places with a broader public interest, the platform can request permission from the social circle to publish some of the content for public viewing. This enables the platform to present to the broader public content of general interest, e.g., a time-lapse movie of an important public place or community landmark.

Further to the descriptions above, a user may be provided with controls allowing the user to make an election as to both if and when systems, programs, or features described herein may enable collection of user information (e.g., information about a user's social network, social actions or activities, profession, a user's preferences, or a user's current location), and if the user is sent content or communications from a server. In addition, certain data may be

treated in one or more ways before it is stored or used, so that personally identifiable information is removed. For example, a user's identity may be treated so that no personally identifiable information can be determined for the user, or a user's geographic location may be generalized where location information is obtained (such as to a city, ZIP code, or state level), so that a particular location of a user cannot be determined. Thus, the user may have control over what information is collected about the user, how that information is used, and what information is provided to the user.

CONCLUSION

This disclosure describes a platform for users to collect and curate privately held media contents of interest to a broader community. Using visual material and other user-generated content, the platform provides social circles amongst users that share spatial and temporal contexts. For example, the platform can be used to document the transformation of public places and communities.